

2 comprising the steps of:

3 (a) forming a plurality of island-shaped semiconductor layers on a substrate
4 having an insulative surface;5 (i) forming a gate insulating film on said substrate, said film
6 covering said semiconductor layers;

7 (ii) forming a gate electrode layer on said gate insulating film;

8 (b) implanting dopant into first regions at outsides of a region designated
9 for a channel region in each of said semiconductor layers directly or through a thin insulation
10 film whose thickness is equal to or less than 50nm by ion implantation to form lightly doped
11 regions;12 (c) implanting dopant into outer regions within said first regions in each of
13 said semiconductor layers directly or through said thin insulation film to form heavily doped
14 source/drain regions whose impurity concentration is higher than that of said lightly doped
15 regions; and16 (d) irradiating a laser beam directly or through said thin insulation film to
17 said first regions to activate dopants implanted in steps (b) and (c).